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AUTHOR Popovich, Thomas F.
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ABSTRACT

This course guide for teachers is intended to provide experiences for secondary students in illumination and lighting for a drama production. Performance objectives listed for the students include: (1) setting up a lighting diagram for a one-scene show and a two- or multiple-scene production; (2) wiring and setting up equipment for a one-scene show and a multiple-scene show; (3) participating in the lighting of a production; and (4) knowing the various lighting methods, problems, and effects. Also included are: "Course Content," which includes the meaning of light on stage, lighting equipment, electricity, designing for a plot, participation in a stage production, and evaluation; "Rationale"; "Suggested Learning Activities," which includes field trips, guest speakers, team-teaching, design experiments, building a model, and an actual stage production; "Glossary of Stage Terminology," which contains definitions for eighty words; and "Resources," which lists books, periodicals, films, theaters, and equipment and supply sources. (WR)

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AUTHORIZED COURSE OF INSTRUCTION FOR THE QUINMESTER PROGRAM

DADE COUNTY PUBLIC SCHOOLS

STAGE LIGHTING (MULTI-CURRICULAR) (Tentative Course Outline)

Art Cft 1	6683.07
CM Art 1	6693.04
Int Dec	6698.02
Drama 1	5183.04
2	5184.14

Art Education

CS 600 575

DIVISION OF INSTRUCTION • 1971

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ART EDUCATION

Written by: Thomas F. Popovich

for the

DIVISION OF INSTRUCTION
Dade County Public Schools
Miami, Florida
1971

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PREFACE

Learning has been referred to by many contemporary educators as a noun; but [illegible] as a meaningful action and involvement, doing and [illegible]. As long as people understand that kind of involved learning is what this course of study is all about.

The Galveston Visual Arts Education Curriculum construct is a long range developmental effort directed towards providing a general education for learners in the aesthetically related art education field. To accomplish this goal, fifty-two courses of study have been developed basically for teachers by teachers. Many local art specialists in various arts media have been recruited by the Art Office to write over 75 new and innovative courses of study in the area of art education. Educational specialists from the four corners of this land, along with aestheticians, social critics, and behavioral scientists have hailed the philosophy of the overall art curriculum construct undertaken by the Division of Instruction to be consistent with the latest national trends in art education, and to be an exemplary example of "success" oriented curricula designed to provide intense involvement in aesthetics and creative arts through group and individualized participation on the part of the learner.

All courses of study produced have been constructed with one major goal in mind: to provide a broad framework of goals and objectives; content; instructional procedures and strategies; and suggested learning activities. Many of the technically oriented courses of study list a variety of "Work Sheets" designed to assist the learner with specific and highly technical studio procedures delineated in a manner so that art specialists (teachers) can use them "as is," or utilize the source information as a basis for producing "Learning Activities Packages." The appendix may include other pertinent material needed for today's contemporary art curriculum, e.g., vocabulary, resources for both learner and teacher, etc.

Constructive criticisms or recommendations relating to this publication are invited; please send to: Art Education Office, Room 300, Lindsey Hopkins, A-1.

Charles M. King, Consultant
Art Education

I. COURSE TITLE

STAGE LIGHTING

II. COURSE NUMBERS

Art Cft 1	6683.07
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III. COURSE DESCRIPTION

A course planned to provide experience in illumination and lighting for a drama production. The student will plan and set up a lighting system and develop a working knowledge of various tools and equipment required for this endeavor. A multi-curricular course planned in cooperation with the drama department.

IV. RATIONALE

The theatre is a visual and audio art. To present the best possible visual effects in a production, it is best one knows the established procedures in equipment, design and execution of a luminated set.

V. COURSE ENROLLMENT GUIDELINES

A. No prerequisite

B. Helpful if the student has had prior experience in drama or basic electricity

VI. COURSE OBJECTIVES

At the completion of the course the student will:

A. Set up a lighting diagram for

1. A one scene show

2. Two or multiple scene production

B. Be able to wire and set up equipment for

1. A one scene show

2. A multiple scene show

C. Participate in the lighting of a production

D. Will know the various lighting methods, problems and effects

VII. COURSE CONTENT

A. The meaning of light on stage

1. Introduction

a. Historical background

b. Contemporary lighting methods

c. Background information

(1) Functions of stage lighting
(2) Controllable properties of light
(3) Physical properties of light

(a) Reflection
(b) Refraction
(c) Absorption

(4) Measuring light

2. Mood

a. Psychological impact of light

b. Color

(1) Light sources
(2) Color media
(3) Additive and subtractive mixing
(4) Colored light effects

(a) Costumes
(b) Makeup
(c) Scenery

(5) White light vs. colored light

B. Lighting equipment

1. Instruments

a. Conventional lens spotlights

b. Lens and projectors

c. Lamps

(1) Incandescent
(2) Other sources of light

d. Strip lights

e. Flood lights

f. Lens

(1) Fresnel
(2) Plano-convex

g. Reflectors

(1) Ellipsodial
(2) Parabolic
(3) Specular
(4) Converging

2. Lighting equipment control

a. Control location

b. Permanent and flexible control

c. Control board design and layout

(1) Parts
(2) Functions

d. Dimmers

(1) Resistance
(2) Autotransformer
(3) Electronic reactance
(4) Electronic
(5) Master

e. Magnetic amplifiers

C. Electricity

1. Introduction

a. Simple wiring

b. Power sources

c. Precautions

2. Equipment

a. Transformers

b. Series and parallel circuits

c. Three-wire system

d. Reactance

D. Designing for a lighting plot

1. Introduction

a. Designing in space and time

(1) Dramatic space
(2) Movement on stage
(3) Depth perception
(4) Directional light
(5) Attention attracting light

b. The lighting plot

(1) Floor plan showing location of

(a) Set
(b) Lighting equipment

(2) Plan of lighted areas showing

(a) Sequence of illumination
(b) Color of illumination

2. Set-up of lighting

a. Preliminary lighting plans

b. Mounting

(1) Instruments for specific illumination
(a) Lighting of walls of a set
(b) Background
(c) Interior
(d) Exterior

(2) Special acting areas and locations

E. Participation in a stage production

F. Evaluation

VIII. SUGGESTED LEARNING ACTIVITIES

A. Whenever possible arrange for field trips and guest speakers.

B. During the technical or historical parts of the course, team-teach with the drama or electrical shop teachers in their areas of specialization such as lighting techniques, wiring, etc.

C. Visit an actual production and make arrangements for the students to visit backstage during a performance, dress rehearsal, or construction of a set.

D. Interview a lighting designer or technician who is involved with television or theatrical performances.

E. Visit different types of theaters in the community and discuss with the students the possibilities of lighting a production from a technical point of view.

F. Create simple design experiments using small spotlights, colored gels or cellophane by intermixing different colored lights. Three-slide projectors or flashlights will also work.

G. Choose a simple play. (Consult the language arts department.) Have the students read it. Review the lighting needs of the script, such as source type, etc.

H. Have the students create a model of the set (to scale) and paint it according to a color sketch of the original. Using small spotlights or hand held flashlights, let the students experiment with different positions, colors and focuses of the illuminated areas.

I. Have the students become familiar with the stage of the school; recording the number and types of lighting instruments and controls and power sources, etc.

J. Help the students to mount, wire and focus a number of lamps to be used in an actual production.

K. Have the students participate in an actual stage production as stage hands in charge of lighting.

IX. A GLOSSARY OF STAGE TERMINOLOGY

Act Curtain (Main Curtain) - A curtain directly behind the proscenium. It is raised and lowered to signal the beginning and end of acts or scenes.

Acting Area - The area on stage in which the action of the play occurs.

Apron - That portion of the stage between the Act Curtain and the footlights.

Arbor (Carriage) - A metal frame used to hold counterweights in the counterweight system of flying.

Backdrop (Drop) - A plain or painted curtain at the rear of the stage serving as a background for the acting area.

Backing - A scenic unit placed behind openings in the set to conceal the offstage area.

Back Painting - Painting the rear of a setting to make it opaque or to take out any wrinkles or pock marks.

Backstage - The area of a theatre behind the Act Curtain, including all areas pertaining to the production of the play. Also, that area of the stage that is out of sight of the audience.

Batten - Any long length of pipe or lumber used for attaching or stiffening scenery or supported from the lines of a flying system.

Blacks - A set of black drapery legs, borders and curtains, often provided as standard equipment for a stage.

Block - A pulley, or pulleys, with the accompanying frame.

Book Flat - Two flats hinged together to fold like a book. Also called a Two-Fold.

Border - A narrow strip of any type of cloth hung above the stage to hide that portion of the stage from the view of the audience.

Box Setting - An interior setting, usually composed of three walls and possibly a ceiling.

Cyclorama (Cyc) - A backdrop used to simulate the sky. May be straight, curved, or dome-shaped.

Downstage - That portion of the stage nearest the audience.

Dress Rehearsal - The last rehearsal(s) of the play before opening, in which all technical elements are used--scenery, lighting, costumes, makeup, properties, and sound.

Dressing (Set) - Pictures, furniture, properties, and decorative pieces added to a setting to make it look "lived in."

Dutchman - A narrow strip of cloth used to cover cracks between flats and make them appear as a solid wall.

Elevations - Sealed mechanical drawings showing flattened-out front or rear views of scenic units.

Escape - Offstage steps providing means of access to platforms.

Facing - Flats or cut-out pieces of board applied to the sides or edges of stairs and platforms to conceal the construction.

Flat - Canvas-covered wooden frame that constitutes the principal scenic unit.

Flipper - Any narrow flat (2' or under) hinged to another flat--usually at a 90° angle.

Floor Plan - A mechanical drawing showing the exact layout of the setting on the floor from a view directly above the stage.

Fly - To raise and lower scenery by means of pulleys and rope or cable.

Fly Gallery (Fly Floor) - An elevated platform along one side of the stage to which the pin rail is attached, and used for the operation of flying scenery.

Fly Loft - The area above the stage used for storage of flown scenery.

Footlights - A strip of lights recessed into the front edge of the stage floor.

Forestage - Any portion of the stage extending beyond the footlights into the audience.

Gridiron (Grid) - A structural framework near the top of the stage house, used to support equipment for flying.

Ground Cloth (Floor Cloth) - A covering (usually canvas) for the floor of the acting area, often painted as part of the setting design.

Ground Row - A low silhouette or painted cut-out representing skylines, hills, bushes, etc., placed at the rear of the stage and used to mask lights placed along the bottom of backdrops and eyes.

Header - A small flat placed between two standard flats to form the top of a door, arch, or window.

House - The seating portion of a theatre.

Jog - A narrow flat inserted into a setting wall to form an offset or niche.

Kill - To remove from a scene or setting, e.g., to kill a prop.

Lashing - Joining two flats by means of a cord looped around alternating cleats and tied off at the bottom.

Legs - Narrow drapery or scenery located at the sides of the acting area, used to mask the wings of the stage.

Level - A platform, or any raised portion of the stage, is often called a level.

Line - A rope or cable used for flying scenery.

Masking - Scenic units or drapery used to conceal portions of the stage not in use.

Offstage - That portion of the stage out of the view of the audience.

Onstage - That area of the stage seen by the audience.

Parallel - A type of folding platform.

Pin Rail - A metal railing attached to the fly gallery, containing pins onto which lines used for flying scenery are tied off.

Plug - A small flat used to fill an opening in or between flats for the purpose of closing off or reshaping the opening.

Portal - A false inner proscenium, often decorated, composed of flat-framed teasers and tormentors.

Practical - Said of any property or piece of scenery capable of being used, e.g., windows that open are practical.

Properties (Props) - All items used in a production other than scenery, costumes, lighting, and sound--set furniture, decoration, small hand props carried by the actors, etc.

Proscenium - The wall separating the stage from the auditorium, containing the proscenium arch, which outlines the proscenium opening, through which the audience views the play.

Rake - To set at an angle, either horizontally or vertically.

Return - A flat, usually black, running offstage parallel to the footlights from the downstage end of a setting, finishing off the setting and serving masking purposes.

Reveal - A board, or any stiff material, attached around an opening in a setting to give the illusion of thickness to the wall.

Rigging - Equipment and operations related to the flying system.

Scrim - A loosely woven cloth resembling cheesecloth, used onstage for window glass, to suggest distance, and for "disappearing wall" effects.

Set - Short term for setting or scenery; also used to mean to place into position onstage, e.g., to set a chair for the scene.

Shutter - The actual door within a door frame.

Sightlines - Lines of vision from the seats in the most extreme positions in the auditorium.

Sill Iron - A narrow strip of metal placed across the bottom of the opening in a door or fireplace flat to ensure rigidity and accurate measurements.

Size - A mixture of approximately 1 part glue to 10 parts water, used to shrink canvas on flats, and mixed with dry pigment to form scene paint.

Spike - To mark on the stage floor the position of any piece of scenery or furniture.

Stiffener - A batten secured at right angles to one or more flats or a piece of scenery to ensure rigidity.

Straightedge - Straight strip of wood or metal, 4 to 6 feet long, with beveled edges, used for painting straight lines.

Strike - To remove from the stage area any piece of scenery or properties.

Sweep - Board cut to form the curved portion of an arch.

Teaser - Drapery or scenery placed behind the top of the proscenium arch, used to alter the height of the proscenium opening.

Technical Director - In non-Broadway theatres, the Technical Director is responsible for all technical aspects of the production, including purchasing and supply, set construction and rigging, lighting and sound, set-up, shifting, run of production, striking, and scenery disposal.

Technical Rehearsal - First rehearsal in which scenery shifting, lighting, properties, and sound are incorporated into the production--it may or may not involve the actors.

Thickness Piece - Same as Reveal.

Tormentor - Scenery or drapery placed behind the sides of the proscenium arch, used to alter the width of the proscenium opening.

Trap - Removable portion of the stage floor.

Traveler - A track used for hanging and operating draw curtains; also the curtain or backdrop operated on such a track.

Trim - To adjust flown scenery so that it is parallel with the stage floor.

Tripping - Methods of rigging scenery to fly when the fly loft area is less than normal height.

Tumbler - Lumber, 1" x 3", hinged between the second and third flats of a three-fold, serving as a spacer to allow the third flat to fold over the other two.

Turntable - A revolving disc set into or on the stage floor for the purpose of shifting scenery.

Upstage - That portion of the stage area farthest from the audience.

Wagon - Rolling platform used for shifting scenery.

Wings - Offstage areas on either side of the stage between the edge of the proscenium arch and the stage wall; also, scenery or drapery set parallel to the footlights in rows along the sides of the stage to conceal that offstage area.

X. RESOURCES

A. Books

Bellman, Willard F. Lighting the Stage: Art and Practice. San Francisco: Chandler Publishing Co., 1967.

Bentham, Frederick. The Art of Stage Lighting. London: Sir Isaac Pitman & Sons, 1968.

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B. Periodicals

Billboard

Drama-England

Drama Review

Drama Survey

Educational Theatre Journal

Modern Drama

Plays

Plays and Players and Theatre Wor

Shakespeare Quarterly

Shaw Review

Show

Take One

Theatre Crafts

Theatre News

Tulane Drama Review

Variety

World Theatre

C. Newspapers

D. Films

Building a Set IFB 11 minutes C.

Designing a Set IFB 11 minutes C.

Humanities, The: The Theatre: One of the Humanities.
EBFC 30 Min. C.

Television Lighting NET 30 minutes B & W.

E. Theaters

Coconut Grove Playhouse
3500 Main Highway, Coconut Grove

Merry-Go-Round Playhouse and Drama Studio
235 Alcazar Avenue, Coral Gables

North Miami Playhouse
1603 N. E. 123 Street, North Miami

Opera Guild of Miami
330 Biscayne Boulevard, Miami

Upstage of Coconut Grove
3356 Virginia Avenue, Coconut Grove

Fort Lauderdale Civic Theater

Beaumont Lecture Hall
University of Miami, Coral Gables

Creative Arts Theatre
Miami Dade Junior College - North Campus, Miami

Barry College

F. Equipment and supplies

Cavalcade Equipment Company
2994 N. W. 7 Street

Creative Lighting Consultants
170 N. E. 40 Street, Miami

Horstein Theatre Equipment
759 Flagler Street (W.), Miami

Miami Audio-Visual Company
2623 S. W. 37 Avenue, Miami

Presentations, Inc.
6321 N. W. 37 Avenue, Miami

Scenery, Inc.
7215 W. 20 Avenue, Hialean

Scenic Services
7101 N. W. 6 Court, Miami

Stage Equipment and Lighting, Inc.
12231 N. E. 13 Court, North Miami

Staging By Schmale
115 N. E. 22 Street, Miami

Strobe Optics
8127 S. W. 120 Street, Miami

Times Square Stage Lighting Co., Inc.
318 W. 47 Street. New York City, New York